Quercus rubra - Acer saccharum Forest

COMMON NAME	Red Oak - Sugar Maple Forest
SYNONYM	Red Oak - Sugar Maple Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Deciduous forest (I.B)
PHYSIOGNOMIC GROUP	Cold-deciduous forest (I.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.B.2.N)
FORMATION	Lowland or submontane cold-deciduous forest (I.B.2.N.a)
ALLIANCE	QUERCUS RUBRA - ACER SACCHARUM - (QUERCUS ALBA) FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Isle Royale National Park

This community is rare; it seems to be restricted to the southwest end of the island on Red Oak Ridge.

Globally

This association is found in Wisconsin, Minnesota, Michigan, and Ontario.

ENVIRONMENTAL DESCRIPTION

Isle Royale National Park

This community occupies somewhat steep to steep, south- to southeast-facing slopes at elevations from 1200 to 1300 feet. Soils are rapidly drained sandy loams. Landscape position is a high slope of a ridge.

Globally

Stands are found on dry to dry-mesic ridge tops and upper- to midslopes, occasionally with bedrock outcrops. Soils are moderately shallow (30-60 cm) to deep, varying from fine sands to loams and clay loams (Chambers *et al.* 1997, especially ecosites 23.1 and 23.2). In central Ontario, stands typically occur on mid- to uppper slopes of morainal landforms, with some stands on lower, very moist soils. Soil depths range from shallow (<30 cm) to deep (over 60 cm).

MOST ABUNDANT SPECIES

Isle Royale National Park

Stratum	Species
Tree canopy	*Acer saccharum, Quercus rubra*
Short shrub	*Juniperus communis, Amelanchier* sp.
Forb	*Aralia nudicaulis, Calystegia spithamea*
Nonvascular	*Leucobryum glaucum*

Globally

Stratum	Species
Tree canopy	*Acer saccharum, Quercus rubra*
Short shrub	*Amelanchier* spp.
Forb	*Aralia nudicaulis*

CHARACTERISTIC SPECIES

Isle Royale National Park

Acer saccharum, Quercus rubra

Globally

Acer saccharum, Quercus rubra

VEGETATION DESCRIPTION

Isle Royale National Park

This red oak - sugar maple forest is a closed canopy, deciduous forest. Canopy cover varies from 30 to 70%. *Quercus rubra* is codominant with *Acer saccharum*; other tree species present at less than 10% cover include *Acer rubrum, Thuja occidentalis, Picea glauca, Sorbus decora*, and *Pinus strobus.* Tall shrubs vary from 0 to 30% cover, and cover of short shrubs varies from 10 to 70%. The most abundant shrubs are *Juniperus communis* and *Amelanchier* spp. Cover of herbs is from 30 to 40%. The most abundant herbs are *Aralia nudicaulis*, *Calystegia spithamea*, and *Elymus* sp. Cover of nonvascular plants

is about 10 to 20%. Characteristic nonvascular plants are the moss *Leucobryum glaucum* and reindeer lichens (*Cladina* spp.).

Globally
The canopy is dominated by deciduous trees. Dominant tree species include *Quercus rubra, Acer saccharum*, and *Acer rubrum*. Associates include *Betula papyrifera, Pinus strobus, Populus grandidentata*, and, in the eastern part of its range, *Fagus grandifolia*, *Fraxinus americana*, and *Ostrya virginiana*. Subcanopy species typically include *Acer rubrum* and *Acer saccharum*. Shrubs include *Amelanchier laevis, Acer pensylvanicum, Corylus cornuta*, and *Lonicera canadensis*. Herbs include *Aralia nudicaulis, Aster macrophyllus, Dryopteris carthusiana, Maianthemum canadense, Mitchella repens* (a creeping semi-shrub), *Polygonatum pubescens*, and *Pteridium aquilinum*. Diagnostic species include *Quercus rubra* with groundlayer species typical of the mixed hardwood/conifer region (Chambers *et al.* 1997).

OTHER NOTEWORTHY SPECIES
Isle Royale National Park
Information not available.

CONSERVATION RANK G?.

DATABASE CODE CEGL002461

MAP UNITS 10

COMMENTS
Globally
The type is thought to have originated through a combination of logging and burning of pine stands, at least in Minnesota, and the natural patterns of disturbance are not clear (MN NHP 1993).

REFERENCES
Chambers, B.A., B.J. Naylor, J. Nieppola, B. Merchant, P. Uhlig. Field Guide to Forest Ecosystems of Central Ontario. Southcentral Science Section (SCSS) Field Guide FG-01, Ontario Ministry of Natural Resources, North Bay, Ontario, Canada. 200 pp.

Minnesota Natural Heritage Program. 1993. Minnesota's native vegetation: A key to natural communities. Ver. 1.5. Minn. Dep. Nat. Resour., Nat. Heritage Prog. St. Paul, Minn. 110 p.